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Merle L. Miller

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WILLIAMS, MORGAN & AMERSON
10333 RICHMOND, SUITE 1100
HOUSTON, TX 77042

EXAMINER

JAMAL, ALEXANDER

ART UNIT

PAPER NUMBER

2614

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/752,167	Applicant(s) MILLER, MERLE L.	
	Examiner ALEXANDER JAMAL	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-12, 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Based upon the submitted amendment, the examiner notes that no claims have been amended and claims 1-8,13-18,23,24 are cancelled.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 9-12,19-22** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims all recite either a 'feedback loop' or a 'first loop' with an input and output that are coupled via a switch. The specification states that only relevant circuits are shown in the drawings and referenced in the spec and that other circuits may be present. It is not clear exactly where the 'input' and 'output' of the feedback path are. For the purposes of examination, the examiner assumes the input/output can be broadly read, as they are in the previous prior art rejection (repeated below), and again broadly read in the new rejection based on new prior art.

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The claims all recite a 'lesser current' flows through at least one component, it is not clear how less current would only flow through one component on the loop when the loop was bypassed as all the components would be in series and all would receive less current. Further, it is not clear exactly what the current is lesser than.

Correction/Clarification is requested.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 9-12, 19-22** are rejected under 35 U.S.C. 102(b) as being anticipated by Moyal et al [US 5,809,109].

Regarding **claim 9**, Moyal et al disclose an apparatus, as shown in Fig. 4, comprising:

a feedback path having an input and output terminal (18, 20), the feedback path including an analog-to-digital converter (110) for processing voice signals (Vin) [Fig. 4; col. 3, lines 19-38] ;
a switch (105) for coupling the input and output terminal of the feedback path in response to receiving a control signal (i.e. ring command) [Fig. 4; col. 3, lines 11-18]; and

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a ringing generator (202) for providing a ringing signal to a subscriber line in response to the control signal [Fig. 4; col. 3, line 47-63; col. 4, line 39 to col. 5, line 2]. Less current will flow through the A/D with V_{in} , than with the ringing signal because V_{in} is digital level and a ringing signal is inherently greater as it must drive a telephone line. And as such would cause more current to flow through the A/D.

Regarding **claim 22**, Moyal et al disclose an apparatus, as shown in Fig. 4, comprising:

means (SLAC 4) for processing a signal received over a subscriber line by one or more components in a first path [SLIC 2], the first path having an input terminal (18) and an output terminal (20) [Fig. 4];

means (DSP 120) for receiving a control signal (Ring command);

means (switch 105) for coupling the input and the output terminal of the first path in response to receiving the control signal [Fig. 4; col. 4, line 51 to col. 5, line 2]; and

means (ring generator 202) for providing a ringing signal to the subscriber line responsive to the control signal [Fig. 4; col. 2, line 41 to col. 5, line 20].

Claim 19 is essentially similar to claim 22 and is rejected for the reasons stated above a propos of claim 22.

Regarding **claim 18**, Moyal et al disclose an apparatus, as

shown in Fig. 4, comprising:

means (DSP 120) for using an analog-to-digital converter for processing voice signals [Fig. 4; col. 3, lines 19-39];

means (DSP 120) for using the analog-to-digital converter for DC feed control signal [Fig. 4; col.

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Col. 3, lines 40-45; col. 4, line 8-20; col. 5, lines 31-50];

means (DSP 120) for receiving a ringing control (Ring command) [Fig. 4];

means (ringing generator 202) for transmitting a ringing signal to a subscriber line in response to the ringing control signal [Fig. 4; col. 2, line 41 to col. 5, line 20; col. 3, lines 11-18];

means (A/D converter 110) for receiving a portion of the ringing signal from the subscriber line [col. 2, lines 47-64];

means (A/D converter 110) for converting the portion of the ringing signal to a digital signal using the analog-to-digital converter(110) [Fig. 4];

and

means (DSP 120) for providing a ring-trip indication in response to the digital signal [Fig. 4; col. 2, lines 57-64; col. 3, lines 40-45; col. 6, lines 24-32].

Regarding claims 10-12, 20-21, the limitations are shown above in cancelled claim 18 rejection (the examiner left the claim 18 rejection in order to show applicant that the relevant portions of the prior art had been cited in a previous office action.

Response to Arguments

1. Applicant's arguments have been fully considered but they are not persuasive.

As per applicant's arguments that the feedback path is clearly defined by the specification, the examiner disagrees and again notes that applicant's specification states

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that there may be other intermediate circuitry that is not shown in the drawings. It is not clear where the beginning and end of the feedback path is defined in terms of the claim language. The examiner recommends claiming the complete circuit structure, including the devices which the beginning and endpoints of the feedback path are connected to. The examiner maintains that the claims are not clear as written and notes that the feedback path as claimed is being read as any ring trip indicator that uses an A/D to measure ring-trip detection (as Moyal clearly does in Fig. 4).

As per applicant's comments regarding the 'less current flowing' the examiner maintains that this is not clear, as the exact endpoints of the feedback path are not recited in the claims and again the specification states that other devices may be present that are not shown in the drawings. The feedback path and the current flowing through it are not clear. The examiner reads this claim element as stating an inherent property of digital signaling, in that the maximum current draw of a 5V digital representation of a ringing signal will draw less power (less voltage/current) than the maximum peak of a traditional ringing signal that must ring telephones. The examiner notes that any digitized ring signal (including the one in Moyal) will share this property.

As per applicant's arguments regarding the claim 14-17 rejections, the examiner notes that claim 14-17 have been cancelled as per the most recently filed claimset (3-10-2009), thus applicant comments regarding them are moot.

As per applicant's argument's that Moyal does not disclose a switch for coupling the input and output terminal of the feedback path, the examiner maintains that the feedback path and lesser current provided via the switch is not clearly claimed. Again the

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examiner recommends that applicant write the claims to clearly specify the signal path, including all components in the path to clearly define the feedback path and the lesser current that it receives. The examiner notes that Moyal Fig. 4 discloses switch 105, which will send lesser current or greater current through the A/D based on the position of the switch.

As per applicant's arguments that the input/output of Moyal is not the same as that of applicant's device, the examiner reads the 'input' and 'output' of a loop broadly and contends that Vin and the input to the A/D would read on the input/output as claimed.

As per applicant's arguments that lesser current will not flow through Moyal's path the examiner disagrees and contends that the signal Vin by Moyal will provide less voltage (and as such less current) than the analog ringing signal driving the subscriber loop (which is bypassed by Moyal's disclosed switch).

As per applicant's arguments that Moyal's switch will not function to couple the tip and ring, the examiner notes that Moyal's switch functions in the same manner as applicant's device, in that it switches based on a ringing control signal to allow the ringing wave to be digitized so that ring trip may be digitally detected. Applicant's claims are not clear, but as best understood by the examiner, the claims are reciting a switch that couples two points (terminals) such that lesser current will flow through the A/D. Moyal discloses this in Fig. 4. The tip and ring terminals are part of a feedback path because that is where the ring signal is coupled from. Again applicant's claim language is not clear and the specification does not give a specific and clear detail as to

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exactly what the feedback path comprises (see above responses to arguments and the 112 rejection).

As per applicant's arguments concerning the examiner's inconsistencies in subsequent actions, the examiner maintains that applicant's claim language is not clear and further maintains that the examiner has presented an art rejection as best understood based on applicant's responses, and the submitted claims and specification/drawings. The examiner requests applicant to clearly specify exactly what the claimed 'feedback loop' consists of and where it is clearly defined in the specification. How can a 'feedback path' have an input and output terminal coupled to a switch, this is not consistent with the well known definition of a feedback path (loop). A feedback path comprising two terminals coupled to a switch is vague and unclear.

As per applicant's arguments about the impedance of the Vin line, the examiner contends that a ringing signal draws more current than a voice signal on a telephone line (that's why voice signals require sealing current, http://en.wikipedia.org/wiki/Sealing_current).

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Jamal whose telephone number is 571-272-7498, and whose email address is alexander.jamal@uspto.gov

The examiner can usually be reached on M-F 8AM-5PM.
If attempts to reach the examiner by telephone or email are unsuccessful, the examiner's supervisor, Curtis A Kuntz can be reached on 571-272-7499.

The fax phone numbers for the organization where this application or proceeding is assigned are **571-273-8300** for regular communications and **571-273-8300** for After Final communications.

/Alexander Jamal/

Primary Examiner, Art Unit 2614

Examiner Alexander Jamal

June 11, 2009